

CLAIMS

1. A transcoding apparatus (1) for use in a switching network of a telecommunication system, said transcoding apparatus (1) including:

- a plurality of transcoding units for source encoding and decoding data, for example speech data, wherein at least one transcoding unit (11) of said plurality is capable of operating in tandem-free operation mode,
- switching means (12) adapted to switch data through said plurality of transcoding units,
- a transcoder controller (13) for controlling said switching means (12) and said plurality of transcoding units,

wherein said transcoder controller (13) is adapted to instruct said switching means (12) to insert one of said at least one transcoding unit (11) into a data path associated with a connection between a mobile terminal of said telecommunication system and said switching network, and

wherein said transcoder controller (13) is adapted to instruct said one of said at least one transcoding unit (11) to operate in tandem-free operation mode

characterised in that

said transcoder controller (13) is adapted to instruct, during said connection, said switching means (12) to eliminate said one of said at least one transcoding unit (11) from said data path.

2. A transcoding apparatus according to claim 1, further including:

- a plurality of TCME units (31) for performing TFO-specific circuit multiplication operations

5 wherein said transcoder controller (13) is adapted to instruct said switching means (12) to insert one of said plurality of TCME units (31) into said data path, and

10 wherein said transcoder controller (13) is adapted to instruct, during said connection, said switching means (12) to eliminate said one of said plurality of TCME units (31) from said data path.

15 3. A transcoding apparatus according to claim 1, wherein said transcoder controller (13) is adapted to determine whether or not a switching controller (22) of said switching network intends to add supplementary services during said connection, and

20 wherein said transcoder controller (13) is adapted to instruct, during said connection, said switching means (12) to eliminate said one of said at least one transcoding unit (11) from said data path, if said switching controller (22) does not intend to add supplementary services.

25 4. A transcoding apparatus according to claim 3, wherein said transcoder controller (13) is adapted to instruct, during said connection, said switching means (12) to insert one of said plurality of transcoding units into said data path, if said switching controller (22) intends to add supplementary services.

35 5. A transcoding apparatus according to claim 2, wherein said transcoder controller (13) is adapted to determine whether or not a switching controller (22) of said switching network intends to add supplementary services during said connection, and

wherein said transcoder controller (13) is adapted to instruct, during said connection, said switching means (12) to eliminate said one of said at least one transcoding unit (11) as well as said one of said plurality of TCME units (31) from
5 said data path, if said switching controller (22) does not intend to add supplementary services.

6. A transcoding apparatus according to claim 5,
wherein said transcoder controller (13) is adapted to
10 instruct, during said connection, said switching means (12) to insert one of said plurality of transcoding units as well as one of said plurality of TCME units (31) into said data path, if said switching controller (22) intends to add supplementary services.

15 7. A transcoding apparatus according to any of the preceeding claims, wherein said transcoder controller (13) is adapted to determine, based on an evaluation of locally available information, whether or not a switching controller (22) of
20 said switching network intends to add supplementary services during said connection.

8. A transcoding apparatus according to claim 7,
wherein said locally available information includes results of
25 a supervision of inputs and outputs of said transcoding apparatus (1).

9. A transcoding apparatus according to claim 7,
wherein said locally available information includes results of
30 a supervision of reports from said one of said at least one transcoding units (11) and/or from said one of said plurality of TCME units (31).

10. A transcoding apparatus according to claim 7,
35 wherein said locally available information includes information received from said switching controller (22).

11. A transcoding apparatus according to claim 10,
wherein said information received from said switching
controller (22) includes port address information.

5 12. A transcoding apparatus according to any of the preceeding
claims, further including at least one protocol/interface
conversion unit (15,16,17) for performing protocol conversion
operations between different interfaces,
wherein said transcoder controller (13) is adapted to
10 instruct, during said connection, said switching means (12) to
insert one of said at least one protocol/interface conversion
unit into said data path.

15 13. A transcoding apparatus according to any of the preceeding
claims, further including at least one link supervision
function unit (14) for monitoring the TFO protocol
wherein said transcoder controller (13) is adapted to
instruct, during said connection, said switching means (12) to
insert one of said at least one link supervision function unit
20 (14) into said data path.

14. A TCME head apparatus (3) for use in a switching network
of a telecommunication system, said TCME head apparatus (3)
25 including:

- a plurality of TCME units (31) for performing TFO-specific
circuit multiplication operations
- 30 • switching means (32) adapted to switch data through said
plurality of TCME units (31),
- a TCME head controller (33) for controlling said switching
means (32) and said plurality of TCME units (31),

35 wherein said TCME head controller (33) is adapted to instruct
said switching means (32) to insert one of said plurality of

TCME units (31) into a data path associated with a connection between a mobile terminal of said telecommunication system and said switching network,

5 **characterised in that**

10 said TCME head controller (33) is adapted to instruct, during said connection, said switching means (32) to eliminate said one of said plurality of TCME units (31) from said data path.

15 15. A TCME head apparatus according to claim 14, wherein said TCME head controller (33) is adapted to determine whether or not a switching controller (22) of said switching network intends to add supplementary services during said connection, and
20 wherein said TCME head controller (33) is adapted to instruct, during said connection, said switching means (32) to eliminate said one of said plurality of TCME units (31) from said data path, if said switching controller (22) does not intend to add supplementary services.

25 16. A TCME head apparatus according to claim 15, wherein said TCME head controller (33) is adapted to instruct, during said connection, said switching means (32) to insert one of said plurality of TCME units (31) into said data path, if said switching controller (22) intends to add supplementary services.

30 17. A TCME head apparatus according to any of the claims 14 to 16, wherein said TCME head controller (33) is adapted to determine, based on an evaluation of locally available information, whether or not a switching controller (22) of
35 said switching network intends to add supplementary services during said connection.